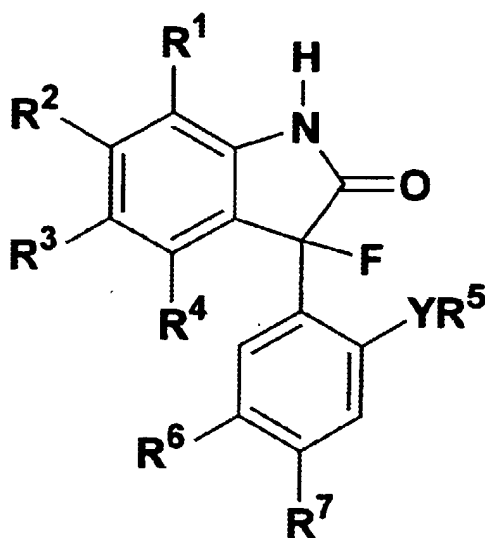


AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Please cancel claims 3 and 11-16.

1. (Currently amended) An opener or activator compound which modulates the biological activity of central nervous system-associated KCNQ potassium channel polypeptides by hyperpolarizing neurons that fire before or during a migraine headache or migraine-related disorder, the opener or activator compound comprising a compound according to Formula I and pharmaceutically acceptable salts thereof, Formula I having the structure



wherein

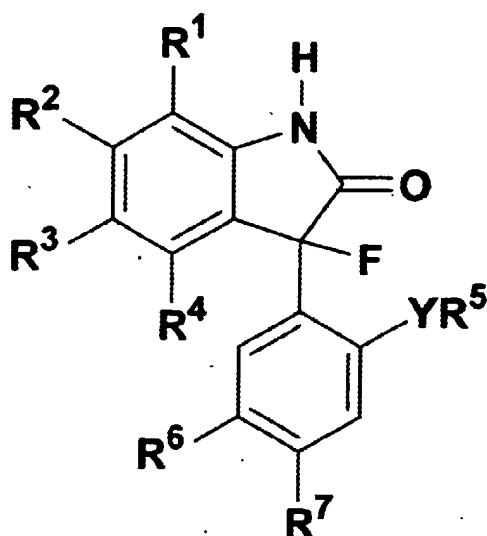
R¹, R², R³ and R⁴ are each independently hydrogen, C₁₋₄ alkyl halogen, fluoromethyl, trifluoromethyl, phenyl, 4-methylphenyl or 4-trifluoromethylphenyl;

R⁵ is C₁₋₆ alkyl, optionally substituted with one to three same or different groups selected from fluoro and chloro, provided that R⁵ is not C₁₋₆ alkyl when Y is O;

Y is O or S; and

R⁶ and R⁷ are each independently hydrogen, chloro, bromo or trifluoromethyl.

2. (Currently amended) An opener or activator compound which modulates the biological activity of central nervous system-associated KCNQ potassium channel polypeptides by preventing abnormal synchronous neuronal firing associated with migraine or migraine-related disorders, the opener or activator compound comprising a compound according to Formula I and pharmaceutically acceptable salts thereof, Formula I having the structure



wherein

R¹, R², R³ and R⁴ are each independently hydrogen, C₁₋₄ alkyl halogen, fluoromethyl, trifluoromethyl, phenyl, 4-methylphenyl or 4-trifluoromethylphenyl;

R⁵ is C₁₋₆ alkyl, optionally substituted with one to three same or different groups selected from fluoro and chloro, provided that R⁵ is not C₁₋₆ alkyl when Y is O;

Y is O or S; and

R⁶ and R⁷ are each independently hydrogen, chloro, bromo or trifluoromethyl.

3. (Canceled)

4. (Currently amended) The compound according to claim 1-3, wherein the opener or activator compound is (+)-3-[5-Chloro-2-[(2,2,2-trifluoroethoxy)phenyl]-1,3-dihydro-3-fluoro-6-(trifluoromethyl)-2H-indol-2-one or 2-(Pyrrolidin-1-yl)-4-(trifluoromethyl)-N-[[4-(trifluoromethyl)phenyl]methyl]pyrimidine-5-carboxamide.

5. (Original) The compound according to claim 1 or claim 2, wherein the KCNQ potassium channel polypeptide is selected from the group consisting of one or more of KCNQ2, KCNQ3, KCNQ4, KCNQ5, and heteromultimers thereof.

6. (Original) A method of modulating neuronal activity associated with migraine or a migraine-related disorder, comprising administering to an individual in need thereof an amount of the compound according to claim 1 or claim 2 effective to inhibit neuronal activity, thereby reducing, ameliorating or alleviating migraine or a migraine-related disorder.

7. (Original) The method according to claim 6, wherein said neuronal activity is selectively inhibited with the trigeminovascular system of the central nervous system.

8. (Original) A method of treating migraine or migraine-related disorder, comprising: administering to an individual in need thereof an opener of a CNS-located KCNQ potassium channel protein, or functional portion thereof, according to claim 1 or claim 2, in an amount effective to selectively limit neuronal hyperexcitability during a migraine attack or migraine-related disorder by opening the CNS-located KCNQ potassium channel protein so as to protect against abnormal synchronous firing of neurons.

9. (Original) The method according to claim 8, wherein the neuronal hyperexcitability occurs within the trigeminovascular system of the central nervous system.

10. (Original) The method according to claim 6 or claim 8, wherein the KCNQ potassium channel protein is selected from the group consisting of KCNQ2, KCNQ3, KCNQ4, KCNQ5 and heteromultimers thereof.

11-16. (Canceled)

17. (New) The compound according to claim 2, wherein the opener or activator compound is (+)-3-[5-Chloro-2-[(2,2,2-trifluoroethoxy)phenyl]-1,3-dihydro-3-fluoro-6-(trifluoromethyl)-2H-indol-2-one.